

Barriers and facilitators to the implementation of adolescent cancer prevention

interventions in rural primary care settings: A scoping review

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Background

- Adolescence is a critical time to establish healthy habits and behaviors for cancer prevention
- Rural populations are at heightened risk for any cancers, and specifically for cancers associated with tobacco use and human papillomavirus
- We sought to explore barriers and facilitators to interventions in four areas important to cancer prevention in rural primary care settings
 - HPV vaccination, tobacco use, obesity, sun exposure

Methods

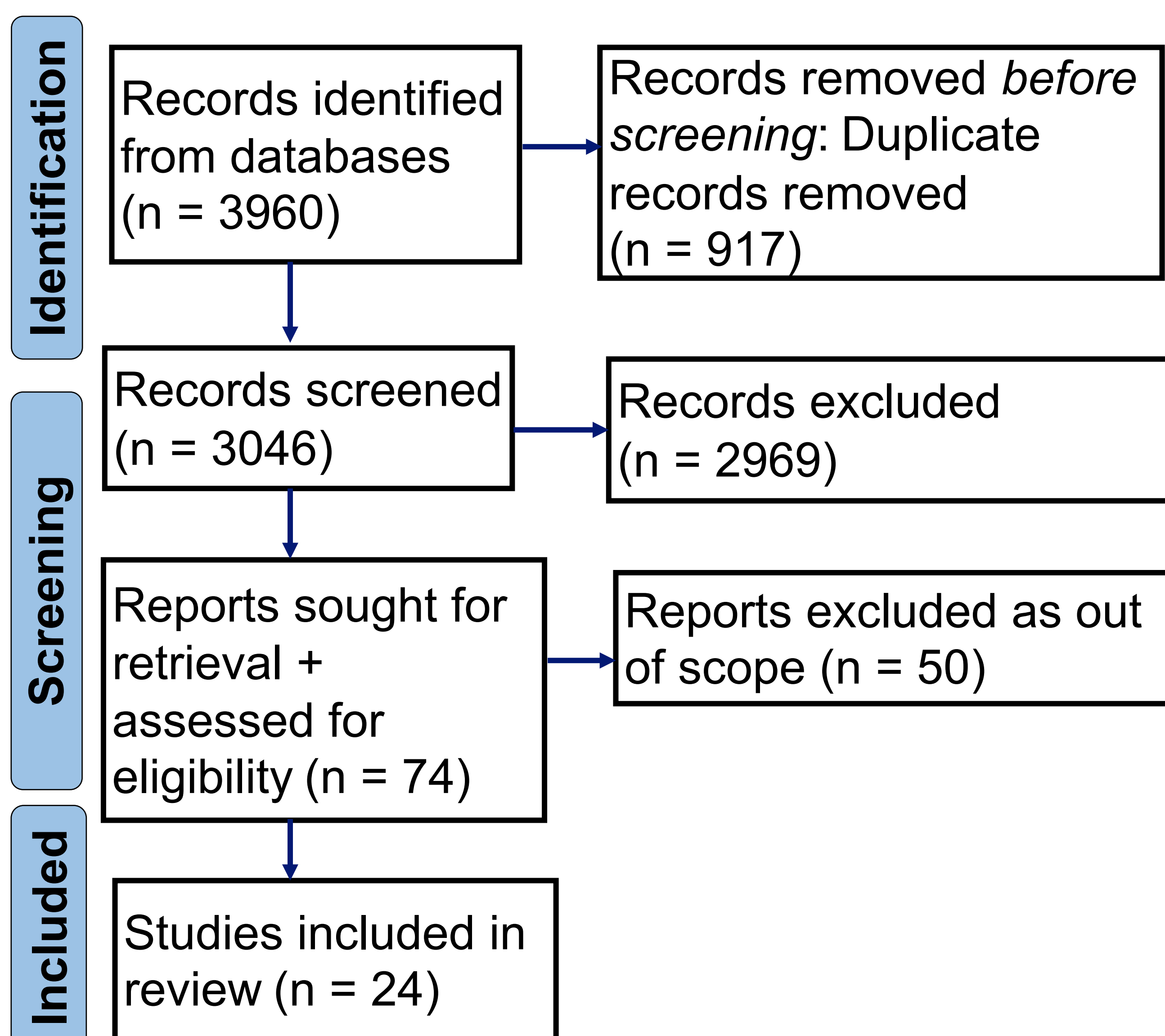
- A comprehensive literature search was conducted using the following bibliographic databases from inception: Ovid MEDLINE[®]; Ovid APA PsycInfo; Cochrane Library; CINAHL with Full Text; and Scopus. No article type, date, or language restrictions were included in the search.
- Each study was screened by at least two team members (GWR, PW, MG) and studies selected for inclusion were abstracted by two team members (GWR, PW, MG, AB)
- Relevant study characteristics were abstracted, including barriers and facilitators. We then used the Consolidated Framework for Implementation Research (CFIR) to organize the barriers and facilitators we identified.

Results

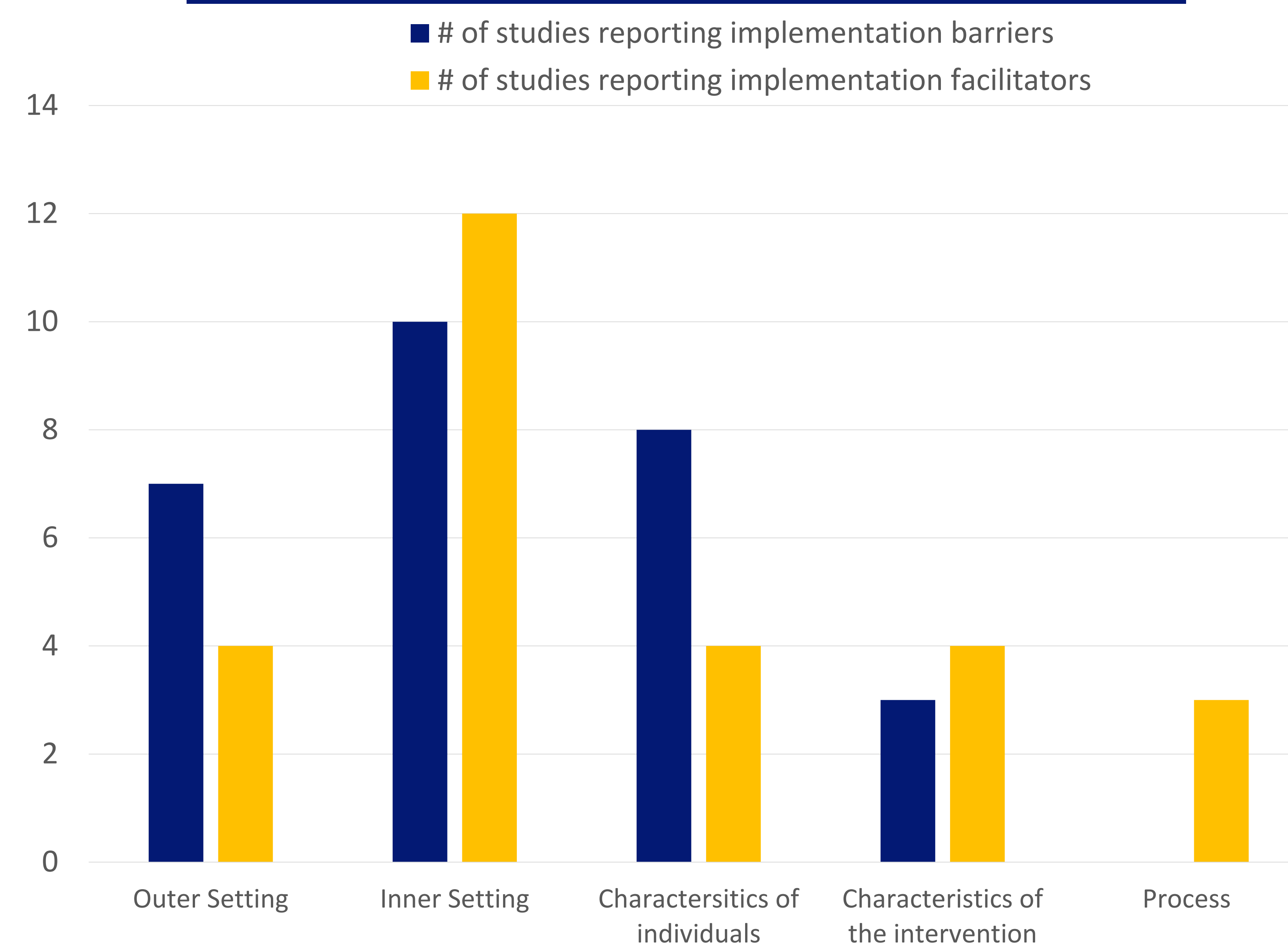
Study Characteristics		N(%)	CFIR Domain	Example Barriers	Example Facilitators
Topic addressed*	HPV vaccination	6 (25.0)	Outer setting	Lack of community resources available to complement interventions (Findholdt 2013; Shaikh 2011)	Access to community-level data on health outcomes for evaluation (Okihiro 2013)
	Sun exposure	1 (4.2)			
	Obesity	17 (70.8)	Inner Setting	Staffing capacity (Askelson 2019; Gunn 2020)	Access to technology to communicate with patients (i.e. telehealth and EHR systems) (Beck 2021; Cifuentes 2005; Shaikh 2015)
	Tobacco use	1 (4.2)			
Study design	Randomized control trial	2 (8.3)	Characteristics of individuals	Limited knowledge on topic and/or need for further training (Finholdt 2013; Parra-Medina 2015; Thornberry 2019; Shaikh 2011; Wu 2007)	Positive beliefs among clinic staff in intervention potential (Anti 2016; Beck 2021; Cifuentes 2005; Wu 2007)
	Non-randomized experimental trial	8 (33.3)			
	Observational/descriptive	14 (58.3)			
Type of practice*	Pediatric clinic	17 (70.8)	Characteristics of intervention	For technology-based interventions: issues with access related to internet speed (San Giovanni 2021)	Easy accessibility of intervention materials (Dietrich 2000; San Giovanni 2021; Shaikh 2015 + 2011)
	Family practice	15 (62.5)			
	Rural health clinic	5 (20.8)	Process	--	Designating clinic-champions to support implementation (Gunn 2020; Shaikh 2014)
	Academic medical center	2 (8.3)			
	CHC	3 (12.5)			
	Other (e.g. Indian Health Services, Internal Medicine, OBGyn clinic)	6 (25.0)			

*Studies included multiple topics and/or multiple types of practice

Identification of studies via databases and registers



Barriers and Facilitators by CFIR domain



Discussion

- While there is significant research on these four topics overall, there were few studies specifically in rural primary care settings
 - Especially on the topics of tobacco use and sun exposure
- Our review highlighted barriers and facilitators that may be particularly relevant in rural health care settings (i.e. staffing capacity, internet issues)
- In the long term, it is evident that we need more research to explore implementation of evidence-based interventions in rural primary care settings
- In the short term, clinics should prioritize what is actionable in terms of addressing barriers and leveraging facilitators, and especially paying attention to changes that can be made that would aid implementation of multiple EBIs
 - For example, improving EHR systems could help with tracking both HPV vaccination rates and screening for obesity

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